CLAIM AMENDMENTS

1.-6. (Canceled)

7. (Currently amended) A network service provider system comprising:

a first coding unit that is communicatively coupled to a first endpoint via a circuit-switching telephone network and communicatively coupled to a first packet-switching network;

a first signaling unit that is communicatively coupled to the first coding unit, and to a second signaling unit via a second packet-switching network;

a second coding unit communicatively coupled to a second endpoint and to the second signaling unit; and

~~one or more sequences of instructions stored in~~ a first memory of the first signaling unit and ~~in~~ a second memory in the second signaling unit having one or more sequences of instructions stored therein, which instructions, when executed by the first signaling unit and the second signaling unit, respectively, cause the first signaling unit and second signaling unit to process call signaling information separately from voice information, by performing the steps of

in response to receiving, from the circuit-switching telephone network, signaling data that is associated with establishment of a voice call, obtaining a network address of a bearer channel port of the first coding unit on the first packet-switching network;

determining that the second signaling unit should receive the voice call; and

sending a message to the second signaling unit, through the second packet-switching network, the message including

a call identifier that uniquely identifies the voice call throughout the network service provider system,

a first address identifier that identifies a network address of the first signaling unit on the second packet-switching network,

a second address identifier that identifies a network address of the second signaling unit on the second packet-switching network,

a connection descriptor that identifies the network address of the bearer channel port of the first coding unit on the first packet-switching network.

8. (Currently amended) The system of claim 7, wherein the ~~one or more~~ first memory and second memory further comprise stored sequences of instructions which when executed by the first signaling unit and the second signaling unit cause the first signaling unit and second signaling unit to perform the steps of:

in response to receiving the message at the second signaling unit, determining that the second coding unit and the second endpoint should receive the voice call;

sending a message to the second coding unit for setting up a connection from the second endpoint to the bearer channel port of the first coding unit; and

establishing a bearer channel circuit, for transmission of voice information that is associated with the voice call, on the first packet-switching network between the first coding unit and the second coding unit.

9. (Currently amended) The system of claim 8, wherein the ~~one or more~~ first memory and second memory further comprise stored sequences of instructions which when executed by the first signaling unit and the second signaling unit cause the first signaling unit and second signaling unit to perform the steps of:

sending a call setup message from the second signaling unit to the second endpoint;

sending a first alert message from the second endpoint to the second signaling unit to the first signaling unit via the second packet-switching network;

sending a modify connection request from the first signaling unit to the first coding unit to set up an end-to-end bearer path between the first endpoint and the second endpoint over the first packet-switching network; and

sending a second alert message from the first signaling unit to the first endpoint.

10. (Original) The system of claim 7, wherein the first packet-switching network and the second packet-switching network are the same physical network.

11. (Original) The system of claim 7, wherein the second coding unit is communicatively coupled to a second endpoint via a circuit-switching telephone network.

12. (Original) The system of claim 7, wherein the first coding unit is communicatively coupled to a private branch exchange (PBX).

13. (Original) The system of claim 7, wherein the second coding unit is communicatively coupled to a private branch exchange (PBX).

14. (Original) The system of claim 7,

wherein the signaling data that is associated with establishment of a voice call is according to a first protocol; and

wherein the message sent to the second signaling unit through the second packet-switching network is according to a second protocol that is different than the first protocol.

15. (Canceled)

16. (Original) A network service provider system comprising:

first coding means that is communicatively coupled to a first endpoint via a circuit-switching telephone network and communicatively coupled to a first packet-switching network;

first signaling means that is communicatively coupled to the first coding means, and to second signaling means via a second packet-switching network;

second coding means that is communicatively coupled to a second endpoint and to the second signaling means; and

means for causing the first signaling means and the second signaling means to process call signaling information separately from voice information, comprising:

means for obtaining a network address of a bearer channel port of the first coding means on the first packet-switching network in response to receiving, from the circuit-switching telephone network, signaling data that is associated with establishment of a voice call;

means for determining that the second signaling means should receive the voice call; and

means for sending a message to the second signaling means, through the second packet-switching network, wherein the message includes

means for uniquely identifying the voice call throughout the network service provider system,

means for identifying a network address of the first signaling means on the second packet-switching network,

means for identifying a network address of the second signaling means on the second packet-switching network,

means for identifying the network address of the bearer channel port of the first coding means on the first packet-switching network.

17. (Original) The system of claim 16, wherein the means for causing the first signaling means and second signaling means to process signaling information separately from the voice information comprise:

means for determining, in response to receiving the message at the second signaling means, that the second coding means and the second endpoint should receive the voice call;

means for sending a message to the second coding means for setting up a connection from the second endpoint to the bearer channel port of the first coding means; and

means for establishing a bearer channel circuit, for transmission of voice information that is associated with the voice call, on the first packet-switching network between the first coding means and the second coding means.

18. (Original) The system of claim 17, wherein the means for causing the first signaling means and second signaling means to process signaling information separately from the voice information comprise:

means for sending a call setup message from the second signaling means to the second endpoint;

means for sending a first alert message from the second endpoint to the second signaling means to the first signaling means via the second packet-switching network;

means for sending a modify connection request from the first signaling means to the first coding means to set up an end-to-end bearer path between the first endpoint and the second endpoint over the first packet-switching network; and

means for sending a second alert message from the first signaling means to the first endpoint.

19. (Original) The system of claim 16,

wherein the signaling data that is associated with establishment of a voice call is according to a first protocol; and

wherein the message sent to the second signaling means through the second packet-switching network is according to a second protocol that is different than the first protocol.

20. (Original) A computer-readable medium carrying one or more sequences of instructions for processing voice call signaling information separately from voice information, which instructions, when executed by one or more processors, cause the one or more processors to carry out the steps of:

in response to receiving, from a circuit-switching telephone network, signaling data that is associated with establishment of a voice call, obtaining a network address of a bearer channel port of a first coding unit on a first packet-switching network;

determining that a second signaling unit should receive the voice call; and

sending a message to the second signaling unit, through a second packet-switching network, the message including

a call identifier that uniquely identifies the voice call throughout a network service provider system,

a first address identifier that identifies a network address of a first signaling unit on the second packet-switching network,

a second address identifier that identifies a network address of the second signaling unit on the second packet-switching network,

a connection descriptor that identifies the network address of the bearer channel port of the first coding unit on the first packet-switching network.

21. (Original) The computer-readable medium of claim 20, wherein the one or more sequences of instructions cause the one or more processors to carry out the steps of:

in response to receiving the message at the second signaling unit, determining that a second coding unit and an associated destination endpoint should receive the voice call;

sending a message to the second coding unit for setting up a connection from the destination endpoint to the bearer channel port of the first coding unit; and

establishing a bearer channel circuit, for transmission of voice information that is associated with the voice call, on the first packet-switching network between the first coding unit and the second coding unit.

22. (Original) The computer-readable medium of claim 21, wherein the one or more sequences of instructions cause the one or more processors to carry out the steps of:

sending a call setup message from the second signaling unit to the destination endpoint;

sending a first alert message from the destination endpoint to the second signaling unit to the first signaling unit via the second packet-switching network;

sending a modify connection request from the first signaling unit to the first coding unit to set up an end-to-end bearer path between a source endpoint and the destination endpoint over the first packet-switching network; and

sending a second alert message from the first signaling unit to the source endpoint.